

HODGES, (R. M.)

UNDERCURRENTS OF MODERN MEDICINE.

THE

ANNUAL DISCOURSE,

DELIVERED IN BOSTON BEFORE THE

MASSACHUSETTS MEDICAL SOCIETY,

JUNE 9, 1886,

BY

RICHARD M. HODGES, M.D.,

OF BOSTON.



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NOTE.—At an Adjourned Meeting of the Mass. Medical Society, held Oct. 3, 1860, it was

Resolved, "That the Massachusetts Medical Society hereby declares that it does not consider itself as having endorsed or censured the opinions in former published Annual Discourses, nor will it hold itself responsible for any opinions or sentiments advanced in any future similar discourses."

Resolved, "That the Committee on Publication be directed to print a statement to that effect at the commencement of each Annual Discourse which may hereafter be published."

UNDERCURRENTS OF MODERN MEDICINE.¹

MR. PRESIDENT AND FELLOWS

OF THE MASSACHUSETTS MEDICAL SOCIETY :

Not longer ago than when this Society was founded, the element of mystery, and the spirit of credulity, pervaded medical knowledge so intimately, that escape from their sinister influences seemed almost hopeless. From that day to the present time, however, there has been a perpetual, and still unceasing effort, to enlighten ignorance, and to interpret obscurity. Science has sorely shaken the foundations of many time-honored delusions. The complex causes and entangled results, which medicine attempts to regulate, have been so unravelled, analyzed, and illumined, that we already look back on an era of unexpected progress. Exact observation has taken the place of speculation and pseudo-philosophic discussion. Predictions can be made, without the shadow of doubt, that definite consequences will follow a

¹ The following pages, prepared to be read aloud, must not assume a printed form without an avowal of the writer's indebtedness to a greater number of articles and individuals, than the absence of quotation marks, or references, might imply. An endeavor to acknowledge this obligation has been attempted in an Appendix.

given lesion. There are maladies which can be prevented, or stamped out, as surely as the waters of a stream can be dammed by the engineer. Apparent inconsistencies,—such as the good health of persons who work in the midst of filth and offensive effluvia, and the impunity with which diluted sewage may be drunk,—are accepted as illustrations of our ignorance, rather than of the variability of natural laws. Theories which are only probable, and opinions based on mere authority, meet with little approval. The observations even of competent judges, are distrusted until they have been verified by others. Tradition obtains scarcely the homage of a respectful attention.

The exercise of a profession like that of medicine,—which, in its working capacity, enters every family, and is brought into relation with the weaknesses, as well as with the ambitions of mankind,—demands not merely a learned knowledge of health and disease, but requires comprehensive familiarity with modern civilized life, executive skill, and business habits, not inferior to those exacted by other technical occupations. Although the public is incompetent to determine the presence or the absence of scientific acquirements, it recognizes practical efficiency by many outward and visible signs. Education does not always carry with it the external indications which catch the fancy, and prove most acceptable to those who seek for counsel and assistance; but bearing and

demeanor, while they hide as often as they reveal the actual traits of an individual, are almost invariably the secrets of his failure or of his success.

The physician, therefore, who aims at a prosperous practice,—accepting the fact, that his personal and domestic joys are at the mercy of a bell,—holds himself in good-humored readiness to meet the unreasonable, as well as the reasonable, exactions of all classes of people. He remains stoically indifferent, if need be, alike to sewing-circle animosity and admiration. He listens with the attention, which is readily mistaken for professional interest, to incessant and repetitious accounts of bygone maladies. Blessed with the magnetism of a calm deliberation of manner, and by that kindliness which enables him to put questions sympathetically, he perceives intuitively the kind of advice his patient desires, and a judicious response lies in wait for every complaint and inquiry. Familiar with, and believing in the latest *materia medica*, he promotes their recovery by carrying his patients with him in the sanguine conviction that all their favorable symptoms are connected with his treatment.

While far from being a high type of his profession, such a man, nevertheless, possesses superior qualifications for usefulness. He has the tact, and a ready appreciation of the effect words can produce, which make him a sort of infallible Pope with the victims of insignificant ailments,—ailments which can be easily inflated into per-

versions of health apparently so serious as to require perpetual attendance. He will endear himself to the deluded invalids, to whom sympathy is such a luxury that they cannot allow themselves even the semblance of recovery; to the middle-aged spinsters who delight in superfluous measures; to the mothers whose children rule the house; and to the credulous men and women who take medicine from force of habit, or for the want of some other engrossing occupation. More than all, because justly, he will be gratefully esteemed by a large and intelligent clientage, to whom his pleasant visits, and placid mannerisms, carry genuine comfort and a full measure of satisfaction.

Masters of the highest arts of practice,—to whom mere popularity is of small account,—are rarely recruited from negative or effeminate men, or from those who are wanting in self-reliance. Strong qualities possess strong attractions, even if they also provoke strong dislikes. Defects stand out, and are more readily seen than virtues. Colleagues will not always sympathize with plain-spoken opinions that diseases, which have been developing for years, cannot be got rid of, like evil spirits, by the exorcism of some potent drug. Clients are not quick to agree, with Emerson, "that the laws of behavior must yield to the energy of the individual," or slow to be provoked by lack of patience, by indifference, or by brusqueness of manner, even when they merely indicate the friction which is generated in striving, by persuasion, to induce people to do their simple duty.

In every social grade, however, there are, invariably, those whom the individuality of some medical man will please. There are men and women who do not wish to be fussed over,—who simply desire to be painstakingly advised, and, if necessary, intelligently dosed. They are not allured by deferential and insinuating manners,—which, Mr. James says, can be traced back to the struggle for existence,—and they look indulgently upon faults, if, beneath them, they can detect that sense which is so rare, but which is nevertheless called *common* sense, and an honesty, frankness, and good judgment which invite confidence. They respect the disinterestedness which resolutely convinces people that they are well, when they only imagine themselves sick. They value the discernment which eliminates non-essentials, and which is ready to suspect that a patient has no disease to cure when he says he cannot take this or that medicine. They realize the value of reserve in social intercourse, and appreciate the brevity of speech,—or, even, the ill-concealed dislike to answer questions,—which is born of a belief that error lies in saying too much, rather than too little. Knowing their own ignorance of the manner in which a medical man must necessarily systematize his professional work, they see that he can, himself, best regulate the hour of his visits. Wisely perceiving that the interests of the practitioner are equally those of his patients, they willingly show consideration for the human nature which is in him, and, instead of dictating a

line of action, amiably concur with his better methods for their relief. Bearing in mind that they can do much for themselves, they illustrate by their conduct the truth of the observation, that "few cases are so hopeless as those which refuse to get well; none so hard to kill as the people determined not to die."

If the rivalry of a crowded profession sometimes tempts men to practise a certain degree of humbuggery in dealing with patients, there is rarely any association between profitable trickery and wilful quackery. Practitioners who please their clients are rarely incompetent, nor do they deserve to be called charlatans. They are not the knaves whose fatal ignorance accentuates and fosters the philanthropic proposition that the State should protect the community from medical imposition.

The fact must be surely though sadly recognized, that the practice of medicine, by people who have not the appropriate knowledge for what they undertake, cannot be prevented by legislation. It is one of the peculiarities of our civilized life that natural bone-setters, mediums, magnetisers, Christian scientists, mind curers, faith healers,—personifying all degrees and kinds of presumption, fanaticism, and ignorance, with motives ranging all the way from rapacious money-extortion to well-meant but mischievous meddlesomeness,—find a foothold and a following, alike in Paris and Pocasset. Such pretenders never have been, and it is not likely that they ever will be, thwarted or

controlled by statutory enactments. If we could prohibit practice by those who publicly proclaim their clap-trap, we should still leave unsuppressed another class, whose readiness to assume responsibility in sickness is equally devoid of any educated qualification. "The grandmothers, mothers-in-law, maiden aunts, and neighbors, whose chief delight lies in the administration of the subordinate provinces of domestic medicine, are past computation; and one shudders to think what might happen if, even as a single result, their energies were turned from this innocuous if not beneficent channel by the strong arm of the law."¹

Interference with a man's choice of medical treatment may be a violation of the "liberty of the subject;" but not on that account do I venture to express the belief that the public should be left to care for itself,—in this respect, as well as in most other matters. It is a dangerous experiment to meddle with the relations of the public and a profession. In any attempt to modify the attitude of those whose rightful privilege it is to treat human diseases with absolute freedom from restraint, it should be remembered how wisely it has been remarked, that "Science commits suicide when she adopts a creed." The saying will prove equally true of medicine, when, by legislation, different medical sects are recognized, even to gain a worthy end.

If the Commonwealth is to be asked to take a hand in medical affairs, the appeal should be

¹ Mr. Huxley.

made solely upon the ground that, as the State employs medical men for certain purposes, it may properly be asked to define the conditions on which it will accept service. It is for the good of the community that nobody should die without an official record of the cause of death; that in both civil and criminal cases the law should be able to summon persons whose evidence may be accepted as expert. A petition that the State shall declare how and from what sources such general services may be received, and who shall be allowed to fill the medical offices of its military and other public institutions, is a request to its law-makers in which all could harmoniously join. An enactment covering a reply to this inquiry should constitute the whole of the State regulation of medicine.

The profession, and not the State, must be the guardian of its own interests. "No elaborate law," says Virchow, in a recent utterance, "no code of ethics, will of itself serve to instil self-respect into the minds of those to whom it appeals, or to keep in check the overwhelming desire of notoriety by which the less scrupulous members of our honorable profession are too often actuated."¹

No safeguard can ever entirely prevent the fatal mistakes and accidents of both druggists and physicians, which arise from imperfectly written prescriptions, or carelessness in the handling of medicines. The business of the druggist is a large and important industry, demanding the best intel-

¹ Med. Times, Nov. 7, 1885, p. 633.

ligence, and nothing should be done to impair its efficiency. It is remarkable that grave errors are not more frequently made. Every physician has had reason, probably on more than one occasion, to thank the acute oversight and the good judgment of some careful apothecary, for the detection and sagacious counteraction of blunders in prescription-writing. As the dealer in medicines bears the burden of this important supervision, let him not be condemned if he occasionally prescribes chalk-mixture, or bromide of potass, over his counter.

It is the prerogative of this Society,—indeed, it is the great purpose of its existence,—to educate public opinion, and to promote and disseminate such knowledge as will make medical legislation, if there is to be any, not only well-advised and enlightened, but serviceable to the community rather than to individuals.

Nothing has better illustrated the influence of an Association like ours, than its effective support of the concurrent public sentiment, which helped to bring about the demission of the Coroner, and the accession of the Medical Examiner. A reform in the existing method of obtaining what is called expert testimony, would equally redound to the credit of this Society, if it were procured by its aid and coöperation.

Judges, juries, experts themselves, alike condemn the manner in which medical evidence is, at present, admitted in the trial of civil and criminal

cases. Recently, in this city, a jury, immediately on retiring, decided to throw out all the medical testimony presented for their consideration. The revision of a mode of procedure,—acknowledged to be defective, and for the faults of which a whole profession is disparaged and ridiculed,—ought not to be found difficult, when a tried system, in Germany, and elsewhere in Europe, has shown how much more wisely than by us the matter of expert testimony may be managed.

Unhappily it is not always the aim of litigation to arrive at the intrinsic truth; and the objection of lawyers to legislation which, with the intention of securing only the best quality of evidence, shall take from them the choice of their experts, and place it in the hands of the courts, grows out of a fear that witnesses, so chosen, might be too much imbued by a desire to substantiate the truth, and the truth only, to meet the wishes of those whose aim is simply to win their cases.

Justice is at a great disadvantage when there is no certainty that real experts are called by either party to a suit,—no assurance that their non-expertness will be shown up, if it exists,—and not always the conviction that they will testify without regard to the side which has summoned them. Counsel cannot be expected deliberately to call witnesses who would certainly, or even possibly, damage the cause of their clients.

That even direct medical evidence should possess value, witnesses must be held responsible for what they say or state. Their trustworthiness, and the

relevancy of any evidence given, can be thus controlled only when it is uttered in the presence of an *amicus curia*, competent to recognize the ignoramus or the pretender by his testimony, and to keep both court and jury from being led astray by side issues, or blinded by irrelevant talk, or deceived by the advancement of theories, which, though they may be true, are presented in a partial, an imperfect, or an exaggerated manner.

The conclusion, therefore, is a growing one, that the appointment of experts, in our Commonwealth at least, ought to be made a part of the judicial function, and that their compensation should be fixed by statute, or by the court, and be paid out of the public treasury. By the adoption of such a plan, court-rooms would be relieved of exhibitions which are frequently discreditable and mortifying; and a recent action by the Bar Association of the City of Boston, encourages the hope that this reformation, which so distinctly concerns the dignity and the welfare of two great professions, will not be indefinitely delayed.¹

The tenor of a physician's intellectual way of life follows the border lines of science, and leads him to breathe the atmosphere, at least, of learning. Wherever, and however, his lot may be cast, it devolves on him to maintain and promote some of the truths most important to humanity. Towns and rural villages, far and near, are, fortunately, not without the practitioners who do their own think-

¹ Appendix I.

ing, who are good observers, broad in their views, abundant in knowledge, efficient in emergencies,—equals in ability to those whose city life may have given them greater opportunities,—and full of the salutary influences which sound opinions, and a high moral tone, exercise among all classes of society.

The art possessed by bees, of producing at will an individual with the requisite qualities for supremacy, has not, however, been acquired by mankind. Men become wise and learned, rather by the strength of their special inclinations, than by the compulsory stimulus of educational expedients. Personal ability, personal energy, peculiar tastes and habits of mind, are qualities which are growing in general estimation; and the opportunity for the exercise of exceptional talents and attainments increases with the growth of population and the material welfare of the country. In no profession is there a more fertile field for turning to account a great variety of accomplishments than in that of Medicine; nor is there one in which the demand is so constant for strength of character, and for intellectual capacity above the average.

The fact that preliminary education is unsatisfactory and defective, and that the study of medicine is consequently begun at too low a point, creates a generally accepted conviction that the time devoted to it by medical schools is insufficient; and yet the practical necessities of a large majority of young men prevent the prolongation of professional training, because this would advance their

graduating age. In England the student of the present day enters his hospital as a boy of about eighteen years of age; and it is declared hopeless to think of extending the term of pupilage,—for the average medical practitioner, at any rate,—beyond the age of twenty-two. In our own country a still earlier maturity not only exists, but is expected. In spite of this, however, the average age of graduation in the Harvard Medical School is more than twenty-four years and a half. A system which matures its fruit so tardily must tend to make educational institutions for the few, rather than the many. This would not be a regrettable consequence if it were the ultimate object of medical teaching to turn every student into a professor, or if a special degree of Doctor Scientiæ Medicinæ, with all that the title implies, were the outgrowth of such a tendency.

There is but one remedy for too short a course of study,—which might be judiciously though not easily extended,—and for graduating at an age which is too old,—and that is to lengthen the curriculum backwards into the preparatory years by requiring better qualifications to begin with.

The well-deserved reputation of the Harvard Medical School,—largely added to by its early abandonment of traditional and imperfect methods of instruction,—is still maintained by the energy and enterprise of a Faculty, many of whose members, practically, give their whole time to teaching. Acknowledged to be a source of pride by the profession throughout the country,—by the city in

which it has its home,—and by a community which has always greatly respected the calling of medicine,—it will be in no censorious spirit that I allude to two or three points of interest, having reference to still further improvement in the educational system of a school upon which this Society's usefulness preëminently depends.

Admission to the Harvard Medical School now requires the applicant to pass a "satisfactory examination in English, Latin, and Physics, and some one of the elective subjects, Botany, French, German, the elements of Algebra, or of Plane Geometry." If, instead of this, a knowledge were alone demanded of the elementary but comprehensive principles governing the action of living things, and which are the substrata of human anatomy and pathology, a great gain would be made. The familiarity of students with Natural Science, especially Physiology and Biology, and the manner in which they pass their examination therein, might easily decide, not only the fitness of candidates to begin the study of medicine, but also test their proficiency in English and classical subjects.

It was the great aim of Professor Agassiz, here, as it has been of Professor Huxley, in England, to make young people good observers, and to convince them that attention, memory, and observation are not only serviceable and remunerative, but always attainable. It should be a chief endeavor of any instruction intended to precede that of a medical school, to cultivate the tactile, visual, and auditory

senses, and to beget an early conviction of the value of precision.

Studies, therefore, which involve the logic of actual facts can only be pursued to advantage where they are taught practically, and with a thoroughness which precludes the possibility of cramming. They must be made relevant to, and in harmony with, the subsequent education which (it is complained) now usurps too much time, and is needlessly difficult, because previous discipline has so little prepared a ground-work for its reception.

Schoolmasters may say that it is waste of time to teach science as they are compelled to teach it; but the means of carrying into effect some plan of primary scientific schooling can surely be perfected, if it is called for; and if details interpose obstacles, patience and experience must overcome them. Eventually such instruction will be organized as well as,—better than, I trust,—classical teaching has been hitherto, and High Schools, at least in all cities and large towns, will become competent to fit young men for the study of medicine. The practical character of the age is gradually eliminating from education many of the special processes by which the intellect was formerly developed. Various kinds of laboratory and experimental work in physics are already urged upon all,—and adopted by some,—preparatory schools, as optional for pupils to whom a large amount of Latin and Greek does not offer the intellectual

discipline or equipment which they are aiming to obtain.¹

Harvard University is active in the effort to make natural science an attainable and profitable study. In the interest of those intending to become medical students, electives in Anatomy and Physiology have been asked for in its academic department. The Massachusetts Institute of Technology, and the Johns Hopkins University, have already established courses introductory to the study of medicine. These are wise, tentative endeavors,—even if rudimental and inadequate,—to provide instruction which shall save, by anticipation, much of the labor,—and, therefore, much of the time,—now connected with the acquirement of a professional education.

I cannot but think that compulsory attendance on the same course of instruction, for two or three successive years, would be an advantage in certain branches of study, and above all in Anatomy; because, from beginning to end, Anatomy consists of intricate details. These are difficult to grasp mentally. Many require to be memorized, and the knowledge of them is worthless if not exact.

Furthermore, if the studies of Anatomy, Physiology, and Therapeutics could be arranged with maximum and minimum requirements, the separate grades into which students are inevitably divided would find the measures of their differing capacity

¹ "Jesse Foot accuses me," said John Hunter, "of not knowing the dead languages; but I could teach him that on the dead body which he never knew, dead or living."

better filled. Time and money could be expended to more permanent advantage if there were both prescribed and elective courses in each of these departments, in place of the present exaction of equal and uniform proficiency from all pupils. The aims of individual ambition would also be more securely gratified; and the hours available for obtaining practical acquaintance with the phenomena of disease, or for special subjects of study, both by teachers and advanced pupils, would be supplemented to an extent not heretofore possible.

In this connection I venture to suggest that, if examinations should attack learning less on its intellectual side and more on its practical side,—as might be the case if they were not so generally conducted in writing,—knowledge would still be as exact, while the examinations themselves would not be the educational regulators (it might almost be said the despots) they now are. Though we may not follow the example of universities under other surroundings, and adapted to other needs, we can still adopt the business methods of American requirements, without lowering the standard of liberal and productive scholarship.

I have no hesitation in saying that teaching of medicine and surgery by set lectures only, or even largely, is unsuited to the wants of learners, and is already recognized as antiquated. To justify this assertion I need but refer to the sentiment of medical teachers in London, and to the comparable illustration which is furnished by the Law School at Cambridge. The disappearance of systematic di-

dactic lecturing, and the substitution of corresponding tutorial instruction,—if the difficulty as to the number of teachers and the expense of such a system could be met,—would be, radical as it seems, a most progressive step in education. Books and lectures may make scholars, but not practical physicians. American students add to their course of study a year in Europe,—not because the hospitals are larger, or the knowledge of teachers greater than in their own country,—but because, in small classes, under the immediate guidance of a first-class instructor, they can see and demonstrate every fact for themselves.

The existence,—side by side with its University Faculty,—of what is called an Extra-Mural Medical School, accounts in great measure for the attraction which Edinburgh has offered to students of Great Britain during recent years. The generous rivalry, which the tutorial character of such a school generates, cannot but inspirit the neighboring university; and it should be realized in America, as it is in Scotland,—and as it also is in France, in the *enseignement libre* of its *Ecoles Pratiques*,—that no policy could be more short-sighted than to discourage competitive teaching which exercises so healthy a stimulus, or to restrain pupils from obtaining, wherever they may think their interests are best met, that instruction which is to carry them through their examinations.¹

There are misgivings here,—and they are equally strong elsewhere,—as to the influence upon the

¹ Appendix II.

practical education of young men which is exerted by the Training Schools for Nurses, now so popular and so numerous.

An interested and superior class of young women, who bring great enthusiasm to their work, are instructed, by teachers of the highest grade, in Anatomy, Physiology, the Theory of Wounds and their antiseptic treatment, Fractures and the use of Splints, and Bandaging, in all its refinement. They are taught how to observe symptoms, count pulses, take the temperature, judge of doses, if not of drugs, and to prepare systematic written reports of cases. Purely medical subjects, such as Dropsy, Rheumatism, Erysipelas, Gangrene, and Diseases of the Eye, are included in the list of lectures given at one of the oldest of these institutions.

Many of the duties which are now delegated to nurses in the wards of the hospitals where they obtain their training, are such as physicians have heretofore attended to personally. In private practice they are encouraged to regard certain details of domestic labor, on which the welfare of the sick depends in no small degree, as menial, or inconsistent with the "elevation of their calling." Their social status in the family by whom they are employed, is a constant source of trouble. Practical experience leads many to the conclusion, that as a nurse advances in special knowledge she proportionately retrogrades in the efficient discharge of the minor duties and drudgery, which, after all, are the chief requirements of her occupation.

Experienced training-school pupils become so familiar with many manipulations and points of practice, that hospital students give way to them, partly from a too common *vis inertiae*, and partly from a fear of showing themselves less skilful; but, more than all, from the idea that time cannot be profitably spent in learning the minutiae which belong to the subordinate occupation of nursing. Nor is this impression confined exclusively to hospital pupils, or those interested especially in surgery. It extends unwittingly to students of all degrees and preferences, in and out of hospitals, and to physicians as well. Dependence on nurses for information about the patients "under their care" (as they say), blunts the young practitioner's own observation, lessens his attention to particulars, and deprives him of the experience and the education which come by doing things for one's self.

There is no reason why a nurse should not be interested in purely medical subjects. Her experience is of the same kind as that of the physician,—in certain cases even greater in its opportunities,—and it is too much to ask that she should pay no attention to the medical aspects of disease; but the fact must not be lost sight of, that, at the present time, intelligent women have the choice before them of being either nurses or doctors, and that they cannot be both.

The needs of sick people, so far as the requirements of the sick room are concerned, are of a nature which women alone can satisfy. The present system has been brought about by the aid,

if not at the instigation, of physicians. Admirable in many ways as its results are; greatly as trained nurses contribute to the comfort of patients, physicians, and families; in spite of the fact that nursing takes a higher stand, for the very reason that drugs, outside of a few specifics, are less and less depended upon,—it would be a misfortune if the existing method of teaching nurses should tend to lift them out of a position,—servant-like though it must be in many respects,—which it is a womanly privilege to fill, and one not unworthy of female ambition. It would be still more deplorable if their training should bring female nurses into collision with physicians, either of their own or of the other sex; or if, by their too near approach to the same lines of study, the zeal of medical students should be diminished. Worst of all misfortunes would be the creation of an unexpected hybrid, neither servant, nurse, nor doctor.¹

I have already expressed the opinion that a man should be scientific in thought and purpose when he *begins* the study of his profession, or there is small chance of his ever becoming so. No one, therefore, will suspect me of either indifference or doubt as to the value of sound medical learning.

The study of the phenomena of life,—and therein lies the whole of science, so far as the business which engages our attention is concerned,—has exercised a great influence in promoting truer estimates of disease and wiser methods of treat-

¹ Appendix III.

ment; but a just and natural proportion should be maintained between that part of our pursuit which is purely scientific and that which is practical. If one is in danger of being prosecuted at the expense of the other, it ought not to be the latter.

The lack of practical knowledge on the part of a physician, otherwise profoundly learned, may cause an immense amount of suffering. It may give an impetus to disastrous epidemics. Hesitancy to command the isolation of a single case of measles or scarlatina,—or delay in so doing,—subjects a family, a school, or a community, to the peril of an epidemic more dangerous than the small-pox. Dirty finger-nails may communicate a fatal poison, through the trivial operations of surgery which every physician undertakes to perform, or inaugurate the “private pestilence” which still sometimes follows in the track of the obstetrician. The increasing frequency of non-union in fractures, if I can trust my own observation, shows that they are not so skilfully treated as formerly. The aene of an emigrant, it is said, has quarantined an ocean passenger-steamer. Within the past year, in a town with the organization, resources, and appliances of 8000 inhabitants and 13 physicians, an outbreak of typhoid fever reached the extraordinary proportion of 1200 cases in one month, 500 occurring within the first ten days after its irruption. Through this outbreak 300 families were made dependent on charity at one time, and 107 lives were sacrificed. The extra expenditure by the sufferers was \$60,000, besides an equal

amount lost in wages through enforced idleness. Beginning with a single typhoid patient, whose accumulated evacuations suddenly gained access to the town's aqueduct, the germs of disease were disseminated with great rapidity along the line of water distribution; but the differences of medical opinion, as to the origin of the trouble, were at first so great that no prompt restrictions were placed upon the use of the drinking-water, though it was suspected from the outset of being the medium of conveyance for this terrible affliction, ending in such unnecessary loss of life. Subsequent developments proved the suspicion to be well founded, and the large number of suits brought against the water-company by the relatives of those who died, indicates the prevalent impression that this epidemic might have been prevented by proper vigilance.¹

Ignorance of certain groups of diseases is acknowledged and confessed by every honest physician. The rapid accumulation of facts in all departments of medical research is beyond the comprehensiveness of a single mental grasp. There are anatomists and physiologists who have never set foot within a hospital. The International Medical Congress, with its twenty or more sections, is an illustration, as well as a recognition, of distinct demarcation in the lines of professional study.

Almost without exception, such sub-divisions are concessions to convenience, and owe their exist-

¹ Appendix IV.

ence largely, and perchance unfortunately, to considerations connected with the treatment of disease. In nearly every instance they represent departments of operative surgery, in which particular skill or special manipulations are required; and their technical element, often reaching the highest refinement, has exercised a great influence in advancing the art of medicine. But they have also abetted a mistaken tendency of public belief, that elaborate division of labor must necessarily be as useful and successful in a learned profession, as it is in the mechanic arts.

Old fashioned practice,—that is to say, the practice of thirty or forty years ago,—looked on specialism as an innovation of doubtful respectability. Sick people were then regarded as private property, and poachers were punished if they intruded on personal preserves. To-day the assumed right to deal exclusively with the diseases of definite parts of the body,—generally those beyond the sick man's own range of vision,—is no longer regarded as a personal presumption, or as a violation of ethical rules. Patients, even, exercise the prerogative to be their own judges, both as to the nature of the particular disorder from which they think they suffer, and of the remedy it requires.

It is also asserted that the empire of the general physician and surgeon is crumbling away, and that his dirge is being chanted. The *personnel* of a general practice is said to change entirely in about the same time which it is popularly supposed to take for the renewal of the combined atoms of

the human body; and the family doctor,—once a fixed and immutable institution,—finds it his office, now-a-days (it is cynically declared) solely to decide what specialist shall be summoned, and must count himself highly favored if subsequently invited to listen to the opinion obtained, or lend his assent to the treatment prescribed. "Specialism," we are told, by its recent vindicator, "being a movement founded on the true principle of progress, and in harmony with the general 'stream of tendency' in these days, will gain strength and volume as it advances, sweeping away, in its victorious current, all the rubbish of pedantic prejudice and malicious bigotry that formerly defiled its waters, and hindered their flow."

There can be no denial of the fact, that whoever, in addition to his general acquirements, knows more about some particular thing than any one else,—or at any rate can do some special work preëminently well,—has a decided advantage over his fellows; but the suggestion that all diseases of the body, and not merely those of its inlets and outlets,—even though they are beyond the reach of mirrors, aspirators, or sounds,—must be put in the same category with ailments of throats and ears, and reveal their secrets hereafter only to the sharp observation and skilled insight of specialists, is one which will hardly be conceded at present. With all the facts before them, enthusiastic students and workers still deliberately select the broad roads of general medicine and surgery, in preference to the narrow and possibly devious

paths of special practice, though the latter may lead to speedier pecuniary success.

The human body is made up of parts and functions so thoroughly inter-dependent that it cannot be parcelled out into defined and isolated regions. Let me illustrate this self-evident statement by quoting a post-mortem diagnosis, made by Professor Fitz, and taken absolutely at random from the Autopsy Book of the Massachusetts General Hospital. It reads as follows:—"Chronic Pneumonia; Suppurative Pyelitis; Chronic Perimetritis; Hematoma of Ovary; Ischio-rectal Abscess, with Perineal Fistula; Chronic Typhlitis, with pseudo Polypi; Gangrenous Ulceration of Vermiform Appendix; Granular Degeneration of Liver and Kidney." The patient, with this appalling pathological conglomerate as his record, was one who, if alive, would have sought the advice of a specialist in diseases of the chest, and none other.

Despite all arguments drawn from expediency,—despite the difficulties encountered in the mastery of details, by any physician who has not had a special training,—one such case as that just alluded to emphasizes an assertion which cannot be disputed, that he who has the most comprehensive knowledge of the human organism and its disorders is, with certain well recognized exceptions, best able to determine what is the matter with any given part of it, and so to help its unlucky owner to recovery, either through his own practical skill, or his ability wisely to select the colleague whose attainments may permit him to

deal better with the case than he can. This object will not be less readily achieved if the practitioner acknowledges the limitations of medicinal therapeutics; or believes in the maxim that "the best physician is he who can distinguish what he can do from what he cannot."

Greater refinement in the distribution of medical practice is not likely to carry its analytic tendency beyond the present separation of physicians into a few distinctive and somewhat inclusive classes, drawing from a common fountain of knowledge, and maintaining the integrity of their profession, by the essential identity of science in every department. Accurate and familiar acquaintance with the applied laws of the latest medical learning is, in these days, a part of the most limited professional outfit. The merest practitioner equips himself with this resource, in the same matter of fact way that he buys a thermometer or a stethoscope. Without it he can scarcely take part in the present competition for wealth, influence, position, and advancement. But skill in diagnosis is, and always will be, the essential feature of a physician's business. What is the matter with a patient is the fundamental problem which presents itself for his consideration, and the more he lays emphasis upon methods of treatment, the greater will be his danger of an approach toward empiricism. Increase of competition may place our successors under a mighty temptation to think, as the French epigram puts it, that "there are no such things as diseases, but only patients;" and

make them forget that medicine is a profession, not a trade. It is to be confidently hoped that the growing efficiency of medical education, with its broad and intelligent training, will encourage a higher standard of self-respect than is implied in such a misgiving.¹

The knowledge accumulated by medical science has far outrun the capabilities of remedial art, in its adaptation to practical use. When we venture into the domain of medical and surgical treatment, the foreboding signs of ignorance and inexactitude are betrayed. The discouraging absence of sure measures of relief, when the hope of alleviation is strongest, only reveals the paucity of our resources, and the disproportion between the natural stimulus towards action which is instinctively aroused by the presence of sickness and suffering, and the lack of means to act efficiently. The impulse and provocation to "do something" are too apt to instigate a pretence of knowledge, or to prompt an audacious, irrational, or trifling interference, which subverts comfort but does not cure disease. This anxiety incites us to unavailing prescriptions and modes of procedure, which, worthless as they are, pass into such general use that even the most conservative sometimes accept them as articles of faith, scarcely admitting of question.

Therapeutics, when not guided by an intelligent and definite purpose, are superfluous and meddling. Surgical operations, which, from the out-

¹ Appendix V.

set, it is known cannot be completed, and into which every surgeon remembers with regret that he has been drawn by some vague expectation of benefit,—the infiltrating epitheliomata, the adherent and fatally located tumors, the malignant growths sure to return, the limbs crushed in railroad accidents, from which he has not withheld his hand,—have certainly contributed nothing to the self-satisfaction of the operator, or helped to advance even the purely mechanical part of surgery.¹

Prurigo secandi is a malady as obsolete as its designation; and the anxiety to attach one's name to a new instrument, or to identify it with some ingenious surgical device, is not a proclivity of the present generation. It was formerly thought the height of anatomical and operative skill to reach the almost inaccessible foci of certain cranial neuralgias. The undeveloped and atrophied muscles of cleft palates were once, with infinite pains, unrequitedly sewed together. Varices of the legs, and varicocèles, were operated on. Tonsils were cut off with fabulous frequency. Tenotomy was uselessly practised. Diseased joints, which time and immobility would have cured, were amputated or excised. The operation for cancer of the breast was as habitual as it is now exceptional,—or, at least, as it soon will be.²

The aim and endeavor of the present day is to perfect preventive and prohibitory measures, which

¹ *Lancet*, March 21, 1885, p. 527.

² Appendix VI.

shall exclude or annihilate disease; which shall render many surgical operations unnecessary, or, when inevitable, shall eliminate from them the extraneous and accidental complications, which not only check the processes of recovery, but imperil life itself. The success of these efforts has rescued our labors from the domain of chance; and favorable results are ensured, in medicine as well as in surgery, under circumstances which were, heretofore, invariably attended by failure.

It seems incredible that members of the profession should have been cautioned, as they were when I was a student, against being "dazzled by the alleged success of ovariectomy;" or that a distinguished editor should have declared, that "a fundamental principle of medical morality is outraged whenever an operation so fearful in its nature is performed."¹

The intimation that many causes of disease are to be found in the air, the water, the soil, or the food we eat, and the assurance that they are therefore controllable, has given activity to the study of hygiene, has made Health a department of the State, and has called into existence a new profession, that of the Sanitary Engineer. The novel problems presented for investigation by these multifarious suggestions are such as can be solved only by exact methods. Their intricacies are followed out in laboratories, with so much greater advantage than in hospitals and sick-rooms,

¹ British and Foreign Medical Review, Oct. 1843, p. 402.

that almost all modern medical knowledge, of which we are so justly proud, owes its existence to purely scientific workers.

The guesses of genius are said to be sometimes more valuable than the demonstrations of mediocrity. "Preconceived ideas, submitted to and controlled by severe experiment, are the vital flame of scientific observation."¹ They give purpose and direction to one's pursuit, and are the working hypotheses essential to the practical application of our knowledge.

One of the earliest verifications of the suspicion that living organisms might be a cause of infective disease, was the result of Pasteur's elaborate study of fermentation. This inquiry led the distinguished savant to surmise, and finally to determine absolutely, the microbial nature of a contagious malady of the silkworm, known by the name *pébrine*, which threatened to extinguish the entire silk-industry of Europe. The practical importance of these investigations, and their economic success, gave a great impetus to microscopic researches into the bacterial character of a large class of diseases, and led to the crucial method of their study by the artificial culture of micro-organisms. The significant issues of these experiments we are only now beginning to appreciate.

The whole order and sequence of facts in any discovery is rarely arrived at. Explanations are only partial, and danger lies in their acceptance as final. In the records of human investigation,

¹ Histoire d'un Savant par un Ignorant, p. 284.

however, it would not be easy to indicate measures of more promise,—even in their present state of incompleteness,—than the suggestions for the prevention and cure of disease, which the Germ-Theory has prompted in regard to tuberculosis, cholera, various zymoses, and malarias, as well as in connection with widespread and destructive affections of agricultural and industrial interests. It would be difficult, also, to name an expedient that has proved more humanely useful than the antiseptic practice, which saves life and limb by excluding germs from wounds, through the, now, almost universal adoption of rigid hygienic precautions, strict cleanliness, and thorough drainage.

It should not be forgotten that these contributions to human welfare have mostly come, as they only could come, from experiments on living animals. Neither should it pass unnoticed, that the knowledge of two remarkable facts in the economy of nature,—the invisible but perpetual ploughing of the soil by its living tenants, and the relation of germs to disease,—has been derived from the study of creatures seemingly so unimportant as the earthworm and the silkworm.

The success of intelligent effort to avert disease would not be fairly stated, without a distinct recognition of the fact that the alleviation of suffering,—in its restricted and individual sense,—is one of the constant accompaniments of this endeavor.

Pain has its uses. It obliges rest. To prevent pain, or to cure pain which exists, additional pain must not be caused. Infrequent handling and inspection are essential conditions of surgical antisepsis. Rest, physiological as well as mechanical,—which, always excepting anodynes and anaesthetics, implies a masterly inactivity so far as drugs are concerned,—constitutes an immense therapeutic power, fortunately extending itself, by the agency of more and more rational methods of treatment, throughout the whole field of modern medicine and surgery.

So long as the belief existed that pain was Divinely intended to be a chastising or an improving agent, harmonious and vigorous efforts for its permanent diminution, or for its complete removal, were not to be looked for. The introduction of anaesthesia, by the inhalation of ether, was retarded by such a superstition. The conviction was reached very slowly, especially in certain communities, that the time had come when it was the paramount duty of physicians,—always and everywhere,—to avail themselves of this agency for the prevention of suffering. The logic which converted dogmatists to the use of anaesthetics during child-birth, must force the acknowledgment that it applies equally to their employment under all circumstances of severe pain. There can be no longer a doubt of the abstract right to procure insensibility by the use of every accessible resource, whenever pain is constant or acute, and especially when it is associated with hopeless disease. Few

medical men, few patients or their friends, now shrink from the responsibility of such a procedure.

Recall the mortal injuries,—which so many of those here present have witnessed on the battle-field,—from wounds received under circumstances rendering the sufferer's removal impossible! What a blessing must have been the unstinted morphine which the humane surgeon left behind him, without questioning whether in so doing he shortened the few possible hours of existence that remained! Who does not give anodynes with a lavish hand in the last stages of cancer! Who will not unhesitatingly soothe the nights made restless by the exhaustion of lingering but certain dissolution! Continuous pain exhausts the physical forces. The life of the great General of our Civil War was not shortened, but prolonged,—as the "sealed doom" of many another has been,—by the comforting opiates which solaced the uncomplaining but limited days of his last few months.

If an individual suffers from incurable pain, except while under the influence of anæsthetics, it has been argued that,—with the concerted action of himself and friends, and the concurrence of two or three medical advisers,—and with the adoption of precautions similar to those provided for putting a lunatic under restraint,—it should be allowable to make such an anæsthesia complete and enduring. It is even claimed that a change in our laws which would permit this premature extinction of life,*—in cases certain to end fatally, and liable to be accompanied to the end

with agony,—would produce “benefits simply enormous,” and that nursing the hopelessly sick ought to be looked upon as a “nuisance and a danger.” We are reminded that suicide, under the conditions assumed, is very leniently regarded by many, and perhaps encounters more sympathy than reprobation. As an escape from certain forms of shame and dishonor,—moral pains,—suicide has been defended as in the highest degree heroic. It is contended that such a “cure for incurables” in no wise conflicts with the sanctity of human life.

The impossibility of attaching any importance to the personal consent of a sufferer, or to the request of his friends under the circumstances supposed, need hardly be pointed out. The last stages of painful illness are, as a rule, less painful than those which precede. In itself the act of dying is probably painless. In terrible injuries, which are so often spoken of as illustrations of extreme suffering, shock benumbs the sensibility, and it is not always in our power to distinguish between those cases which are hopeless and those which are not. Recoveries, unexpected by experienced surgeons, follow the most extraordinary mutilations.

I entertain no fear,—because of the presumptive right to evade pain whenever evasion is possible, and endurance can do no good,—that physicians will, therefore, accept the sophistry which claims equally a right and privilege to deliberately relieve suffering by the permanent anæsthesia of death. It is a matter of fact that, whenever we please,

we can secure euthanasia without shortening life. The appliances and the resources for the alleviation of pain are many and efficient. The question of their practical or successful employment is no longer one of uncertainty. The universality of their adoption turns, not upon a point of morals, but upon considerations of public safety. These may safely be left to the wisdom, the integrity, and the conscience of the medical profession.¹

Among the predominant causes of preventable disease in our own community there are two, exercising an influence in youthful life, and particularly among females, which are as universal as those of specific micro-organisms, and scarcely less pernicious. These are insufficient nourishment, and insufficient rest and repose, or, expressed in briefer terms, famishment and fatigue. To counteract these inimical influences is to control, to a great extent, the conditions of life,—especially of city life. It is an ambitious aim, but one which certainly comes within the scope of a physician's personal effort, if not within his professional province.

It is only of late years that the diet of those not actually sick has received the attention it deserved, either in its bearings upon the healthy growth of the human body, or its defensive power in relation to disease. The data supplied by physiology, the dietetic customs of social classes, the likes or dislikes of a physician's own palate, were, until

¹ Appendix VII.

recently, the guiding principles by which the alimental needs of physical economy have been regulated. The conflicting advice of medical men still betrays the absence of any unanimity of opinion on this question, considered from a therapeutic point of view, and there is no subject in which personal experience is more fallacious as a guide.¹

It is a common remark that young people of the present day have poorer health than their fathers and mothers, and especially their remoter ancestors. At the period of adolescence, or before, many live at a rate, and under a pressure, the wear and tear of which average parents fail to appreciate; nor do they think of comparing the life which their children lead, with the calm and unexciting conventionalism of their own youthful days, or with what they may have heard described as the routine of their own parents. The "good old stock" of certain sleepy and quiet towns is often alluded to. Some of us, to a degree which another generation will never enjoy, are endowed with a vitality transmitted by the simple habits of the dwellers in the tranquil and well-to-do homesteads of an earlier day.

¹ Those who have read Sir Henry Thomson's interesting essays on food must not forget that his Lenten views have reference, chiefly, to the proper diet for advanced life, not for the growing years of youth. It is obvious that less nutriment is needed as vitality and activity diminish. It should also be borne in mind that the distinguished lithotritist, artist, and aesthete, is himself a Vegetarian. Notwithstanding this, he has a London reputation as the giver of exquisite dinners "graced by sound wine, judiciously chosen dishes, and easily amalgamating guests," always strictly limited in number to eight; and though absolutely a tee-totaller, he takes "the same sort of pride in his cellar which a scientific floriculturist might in his green-houses, though their contents never have a place in his drawing-room vases." [Nineteenth Century, 1885, p. 777. Society in London, p. 175.]

They grew up with no opportunity of being fastidious. They knew absolutely nothing about luxury, and had not too much of what we call "mere comfort." They had the "reg'lar" and solid meals at "noon-time," which are said to be the foundation of true stability of character, and they enjoyed at least nine hours of sleep every day. They developed into men who were rarely sick, and into women with strength enough to bear and rear large families. These women often possessed an intellectual vigor which inclined them to acquire a masculine education, as well as to devote themselves generously to social, charitable, and other womanly pleasures and duties.

Modern mothers little realize the "brain work" in amusements which, under the thin guise of their possible educational tendency, are made to justify late hours and stinted sleep for growing girls during their school-life; in their practice of music for which they have little capacity, and in which they take but a half-hearted interest; in studies at home, which go so against the intellectual grain, that lessons are imperfectly learned, and forgotten almost immediately; in irregular, prolonged, and motiveless afternoon walks, encouraged because the morning has been spent in-doors. The effect of this prodigal use of physical energy is to arrest the growth of their forces and faculties, to "knock out" of them the vital functions of eating, drinking and defecating, and to induce an amenorrhœa, whose redeeming feature is that it spares them the waste involved

in a monthly loss of blood. It is fatal if girls do too little, and it is disastrous if they do too much. To steer between these two opposing perils is so difficult a task, that the majority of parents end by letting go the helm, leaving the fragile vessel to guide itself, satisfied if they can secure a merely **negative condition of health.**

A justly distinguished master of the Girls' High and Normal School in this city is reported to have said, that a principal qualification for the office he held should be a good medical education. The first hour of his school day was spent in going from room to room, at the call of teachers, to see pupils who had fainted or vomited, or were in "spasms," in hysterics, or, in some other way, had come to a pass which alarmed the inexperienced. These phenomena he clearly recognized as due to fatigue, insufficient sleep, and the want of an adequate breakfast,—a meal which these girls were too tired to eat; or which they did not think worth wasting time upon, when home duties demanded their coöperation, a morning lesson was waiting to be looked over, or a neglected task to be made up, and a long walk intervened between their homes and the school.

The report of Sir James Crichton Browne, on Educational Overpressure in London, which attracted such universal attention two years ago, states that out of 6580 school-children examined, 3034, or more than 46 per cent., suffered from headache. He attributes this state of things largely to innutritious and insufficient food, and

takes pains to say that partial and occasional starvation is not confined to children of the lowest class.¹

The inference from these statistical facts, or from a single teacher's experience, is not necessarily that school-taxes should be devoted to dispensing new milk rather than education, though they seem to hint that a part of the public money might thus be judiciously appropriated. The alleged overpressure in schools is, in the main, a fallacious assumption. Sound study is an advantage, if the general rules of health are attended to, and for one youthful person injured by excessive application, there are a hundred whose physical condition is deteriorated by want of wholesome mental exercise.

The special provocatives of "delicate health" in young females, are in great part social. The deleterious influences of a multiplicity of engagements, of the exacting demands of ambition, fashion, and gayety,—and not unfrequently of an early betrothal,—are intensified by the capacity for endurance which belongs to the so-called weaker sex. A girl can tire out her partners in the "German," one after another, and a feeble wife can carry her baby twice as long as her athletic husband. The more strain there is upon the strength of women, the more completely do they forget themselves and their material wants. They submit, and give no signs of their emotions, to the depressing influences of misfortune or

¹ Westminster Review, Jan. 1885, p. 12.

an unhappy home. They suffer and are silent, with what have been called "bad-husband headaches." They stifle a wounded pride which is deep in proportion to the smallness of the family income, and yield to the aggressive attacks of neurotic influences (the least wearing of which may be the mental), only when the limited energy their bodies possess is exhausted, and which, when once lost, they rarely have the physical capacity, or power of mechanism, to replace.

Even this limitation is trammelled and minimized by the tyranny of prevalent styles of dress. The displaced livers and spleens, furrowed by overlapping ribs, which are portrayed in dress-reform tracts, are not the features on which the imagination of young women should be invited to dwell, half so much as the compressed stomachs, and the diminished room for their distention, which make tight clothes a common cause of inanition, of functional derangements, and of passive congestions, which show themselves in the mottled arms and red noses of half the belles in a ball-room.

The bodies and brains of young women, in the wealthiest and most luxurious circles of society, constantly reveal their imperfect nutrition. Refined emaciation, fair anæmic complexions, eyes made brilliant by dilated pupils, decorous concealment of undeveloped busts and slender arms, excitable and restless temperaments,—wanting sometimes in self-control, but oftener sobered by over-conscientiousness,—are the retributive symptoms which betray a lack of food, sleep, fresh air,

and repose. Some of those who embody these conditions delight to think that Providence has distinguished them from the common herd by certain peculiarities of constitution, and they cherish with great self-satisfaction their supposed idiosyncrasies in regard to what they eat, and in reference to various habits of life. They do not know, or are unwilling to admit, that "want of tone," of which they complain, is only another name for the inertia of exhaustion.

It is useless to humor, or to tease with restrictions, the capricious digestions of those who argue over every mouthful of their food, instead of swallowing it, and whose gastric neuralgias and low level of health are dependent on the defective general condition of their bodies. An eminent modern physician has declared that "he never knew a dyspeptic get well who undertook to regulate his diet;" and the stomach, we are told,—like a schoolboy,—is sure to get into mischief unless constantly occupied. If it behaves perversely, therefore, the doctor must conquer the stomach, and not the stomach the doctor.

We talk and write about "functional diseases," in people such as I have described. It would be more correct to call them "nutritional diseases." Function depends upon nutrition, and nutrition equally depends upon function. No functional condition can exist for a moment, without entailing a change in nutrition; and the extent to which this may be carried, short of organic detriment, is an important practical question in pathology. Any

change which the microscope detects,—such as a most trifling variation of aspect or behavior in the presence of reagents,—is simply enormous considered as a modification of molecular nutrition. That visible alteration,—structural disease, in fact,—may have its ultimate origin in pure disturbance of function, is hardly to be regarded as a mere speculative suggestion.¹

The most superficial observer will perceive that the principal field for therapeutic advance, in the near future, is most likely to be found in the regulation of food, habits, and the incidents of life. Daily and continuous in their operation, these must be of vastly more importance than drugs and "treatment," which are but transient in their influence. We may speculate about ptomaines, leucomaines, and auto-infection, or, with unshaken faith, adhere to the doctrines of bacteriology; but it is still true that the conditions of disease are increasingly traceable to avoidable violations of hygienic law. The care of health, even more than the care of disease, is recognized as the office of physicians. Their duty in this direction has already become the largest and most vital responsibility of the medical office. It is estimated that the annual loss, in the United States, from one single cause,—the preventable typhoid fever,—is twenty-five millions of dollars, in money value.

The average age of the generation is increasing; the general death rate is decreasing, and there are

¹ *Lancet*, Nov. 7, 1885, p. 841.

fewer days of sickness, *per capita*, than when observers began to keep record of such matters. The possession of wealth, with its resultant exemption from privation, lengthens the average of life nearly ten years,¹ and good nutrition is said to be at the bottom of longevity. The saying of the cynic that, in addition to a benign stomach, a bad heart is also essential to health, may, perhaps, be open to doubt, despite the fact that insensibility and indifference must neutralize much of the mental anxiety which undermines physical strength, and weakens self-control.²

Worry is often a needless, though not always an avoidable evil. The attempt to carry on, simultaneously, diverse occupations, and the quick and rushing methods,—intensified by the disturbing accessories of the post-office, the telegraph, and the telephone,—which shape the entire organization of American life, are attended by such an amount of mental and bodily friction, that Recreation, as a remedy for the trials and cares of all vocations, has identified itself with the resources for preventing disease, not less than the demand for ample nourishment. The business assiduity of the medical profession renders the exaction of this therapeutic precaution an absolute necessity for its active workers, not merely on personal grounds, but on account of the example it sets to others.

Its never-ending labor, which allows no repose, day or night, is the great drawback of our calling.

¹ Science, July 10, 1885, p. 37.

² Appendix VIII.

Medical men are apt to feel that they have no right, for the sake of personal ease and enjoyment, to lose sight of their appointed stewardship. As a result, they too often degenerate into mere professional machines, and care for nothing but practice. This confines their thoughts to a groove, and makes them the slaves of an occupation, rather than its masters. Business itself becomes a dull routine. There are men so equably constituted that, metaphorically speaking, they can "shut up shop" at a moment's notice. Many, if not most physicians, live under a different dispensation. When not pursuing their occupations, their occupations are pursuing them; and they are habitually so busy that they cannot even pause long enough to take their daily bread with comfortable deliberation. Irregular life, and the meagre care which medical men take of their own health, make the death rate, especially from suicide, higher among them than in the general male population, or in either of the other principal professions.¹

The custom of all cultivated and energetic communities, which, during one month out of twelve, calls for some other than the habitual employment, even though it may be physically more fatiguing, goes to prove that diversion and change are forms of rest, recognized as among the imperative demands of health and well-being. They are not weaknesses to be resisted, at any-rate, by professional men. Compulsory relaxation is never

¹ *Lancet*, Jan. 30, 1886, p. 203.

so beneficial as that which is voluntary. The utility of vacation, in stimulating the capacity and refreshing the inclination for active duty, goes far beyond the mere pleasure it affords, or the social relations it cultivates. Respite from labor is a safeguard against vexations and adversities which sour the temper and shorten the lease of life.

The thought of being able some day to lay down one's burdens is always alluring. At our last Annual Meeting it was said,—not by one of the oldest members,—that after fifteen years of practice a physician had passed the days of his usefulness,—he was too old for laboratory-work. If the graduating age is to go on increasing, this will not, perhaps, be early for retirement. At all events, it is generally conceded that when he is sixty, a medical man has completed the active period of life; that his ideas have become hardened and stereotyped; that he has accomplished his effective mission, and must leave the path open for other and more youthful spirits.

There are those who have a vague presentiment that, if the harness ceases to brace them up, they shall fall down by the wayside and die; but it hardly speaks well for educated men to become so wedded to routine, that no resources and no pleasures can attract them beyond those within the immediate range of professional occupation. They ought surely to find use for their powers of observation elsewhere than at the bedside. "Successful men may have gained much to retire *upon*, but nothing to retire *to*, if literature, social ties, philan-

thropic interests, nature itself, have been lost sight of, during the rush and struggle of their thirty years of active life."¹ Opportunity for the exercise of skill should be so readily and agreeably discovered in some other than their ordinary vocation, as to make them willingly accept the fact that younger men can do their work better; and so the elder should be ready to step aside cheerfully, and in good season.²

I have indicated a few of the undercurrent agencies which, within the last thirty-five years, have modified the general condition of professional interests, as they affect medical men and the community, individually and collectively. So imperceptibly and insidiously have innovations become established, that we scarcely realize the change they have occasioned.³ The retrospect impresses us with the rapid rate at which medical knowledge progresses, and the vigorous life with which its pursuit is followed. The public profit by this general advance, but the actual gain is discernible only to the initiated.

In this Commonwealth, the Massachusetts General Hospital has been a great element of scientific, professional and social influence,—and, perhaps, equally so throughout the whole of New England, for whose extensive water-shed of patients it was, during many years, the only public medical recourse.

¹ Dr. Roose.

² Appendix IX.

³ N. Y. Med. Record, Oct. 17, 1885, p. 427.

Always in readiness, by wise and liberal expenditures, to adopt improvements, or to be the originator of new designs, it has promoted in many ways the art of caring for the sick in hospitals, and has long been willingly accepted as a typical institution in structural, economic, and sanitary points of view. No better proof of this complacent statement need be offered, than its latest architectural excrescence in Boston, or its model Convalescent Home, on a sunny hillside at Waverly, five or six miles distant from the city. Much of the reputation and of the popular interest which this hospital has acquired is distinctly due to the wise judgment of its Trustees, and to the independence of their financial and executive management.

It is a satisfaction to remind you of the fact that the resources of the Massachusetts General Hospital have never been perverted to the direct pecuniary advantage of its Medical and Surgical Staff, whose services have always been gratuitous. There are querulous laments about unremunerative devotion to the community, in medical journals and by individual physicians, who complain of too much time bestowed in charity, and deprecate the skill lavished on the poor "without money and without price." These facts have been urged as a reason why "pay-patients," in private rooms, or wards, should be either compelled or allowed to remunerate their attending physicians and surgeons; but they have never had weight in the minds of those whose solicitude has guarded the interests

of the Hospital in question. On the contrary, from the outset of its history, it has been realized that such a practice might lead to an objectionable appropriation of its beds by the clients of some designing or prominent official, and that it would be inconsistent with the large benevolence of those by whom it was founded and is still sustained. The office of physician or surgeon is more than its own reward. In any great hospital it is an indirect road to general success in practice; in short, the privileges it involves are so considerable that these positions would be promptly bought for money, if they were for sale. They are gladly accepted, on the conditions posted in every private room and ward of the Massachusetts General Hospital, that, by his appointment, the physician or surgeon "waives all claim for compensation in money, and performs his duty as a charity to the sick and disabled patients under his care, and for the advancement of medical and surgical science."

It is also an acknowledged condition, on the part of every patient accepting the services of its physicians and surgeons, "that no payment shall be made for them, and that no claim of any nature, consequent upon such service, can obtain outside the Hospital, from any member of the staff upon any patient, or from any patient upon any member of the staff who has attended him or her in the Hospital." If the patient desires to express his obligation and indebtedness for professional services received, he is invited to contribute to the

charitable funds of the Hospital. This invitation is not unfrequently accepted.

To dispense charity, without injustice on the one hand, and without being imposed upon on the other, is so difficult, that societies have been organized for the sole purpose of discriminating between fraudulent and honest claims. The benevolent and unrestricted dispensation of medical assistance does not escape imposition. Admission to hospital-wards, either with or without payment of board, is, undoubtedly, an often-abused privilege, so far as the hospital itself is concerned. As a matter of fact, however, instances must be few and far between, in which an attending or a non-attending physician is robbed by an out-patient department, or a dispensary, of the small fees he would be glad to earn; or in which the comfortable honorarium of a specialist is diverted from him by wards or private rooms. Jealousy and distrust are likely to be generated whenever the members of its professional staff have any participation in the financial affairs of a hospital; and pecuniary losses, if they happen, in consequence of this divestment, are fairly offset by the gain in self-respect, the protection from dissension, and from individual avarice, and selfishness, which it offers to those who are associated in the common interests of a charitable institution. That unpaid medical relief exempts such large numbers of people from a necessity for forethought and thrift in regard to prospective sickness, and encourages mendicancy, is another, and, indeed, much graver

consideration. Neither the sagacity of individuals, nor the discussions of Social Science assemblages, have yet been able to suggest a method, satisfactory even to themselves, for the prevention of this contingency.

The general public are year by year better instructed; they grow more and more able to appreciate the qualifications of men, and the result of their labors. There is therefore an interest, outside our own fraternity, in the subjects to which I have directed your attention, in this brief hour of discursive talk.

Medicine and hygiene are among the favorite topics of magazines and newspapers. Diagrams of drainage, temperature charts,—even illustrations of bacilli, and of microscopic sections of malignant growths,—are familiar and attractive features of modern journalism. Elementary physiology and hygiene are taught in the public schools. Instruction in “rendering first aid to the wounded” is given to young ladies, as well as to members of the Police and Fire Departments. Diet-kitchens, dispensaries, hospitals, and sanitary-aid societies are managed by laymen. There is scarcely a reading person who has not heard something of the germ theory. A cow-boy in Arizona was recently shot dead in the saddle for the insult implied in calling his partner “a d——d *microbe*.”

Much of this popular zeal is the expression of a most laudable desire to diminish the evils of personal and collective environment. The energy

and the activity which are directed toward the improvement of public health, and to the beneficent alleviations of sickness, impose an obligation on the community, for its own protection, to facilitate and promote sound learning, by a liberal support of thoroughly equipped schools, and other auxiliary means of medical instruction. The proof of interest in this direction will be found, not so much in moral encouragement afforded by words of approval, as in practical steps taken to furnish the guardians of human health with the best appliances for study and investigation. It is a duty of rich and generous men to supply students with every opportunity to become competent for the most profitable kind of work, by a leisurely, complete, and therefore costly training. So long as medical schools are dependent on the fees of their students for support, the highest results cannot be obtained. The report of the United States Commissioner of Education, in 1883, strongly advised that every medical school in the country should be required by law to procure forthwith an endowment of not less than \$300,000. In this matter the interest of professors, pupils, parents and the public are identical. The motive is not to make schools for a class, or to create free and charitable institutions, but to provide for the permanent maintenance of first-rate education, unrestricted by the embarrassment of expense, and for the diffusion of its influence among the greatest possible number. In an earnest appeal for the endowment of the Harvard Medical School, Dr.

Oliver Wendell Holmes has said: "The only way to insure the independent action of a school which aims at teaching the whole country by example, is to endow its professorships, so that the very best and highest grade of instruction may always be given. A small number of thoroughly accomplished medical graduates will be worth more to the country than twice or thrice the number of half taught, hastily taught practitioners. In the course of a single generation they will elevate the whole professional standard, as they go forth, year after year, missionaries in the cause of health, soldiers, and, if need be, martyrs, in the unending battle with disease and its causes."¹

¹ Appendix X.

APPENDIX.

I.

THE State and the Medical Profession ; T. F. Huxley, *Nineteenth Century Magazine*, Feb. 1884, p. 228—*New York Medical Record*, Dec. 5, 1885, p. 633—*New York Herald*, Sept. 11, 1885 ; Letter of G. F. Eliot, Esq., Counsel for the New York Health Department—Pamphlet, On the best manner of making use of the Services of Experts in the conduct of Judicial Inquiries ; Clemens Herschel, C.E. Printed by direction of the Committee of the Bar Association of the City of Boston on the Amendment of the Law, Boston, 1886—Medical Expert Testimony ; F. H. Hamilton, *Popular Science Monthly*, Vol. 26, p. 603.

II.

Science and Culture ; T. F. Huxley ; Address on Universities, Actual and Ideal ; also, by the same, the article already referred to, *Nineteenth Century Magazine*, Feb., 1884, p. 228—The Proceedings of the British General Medical Council ; *London Lancet*, 1885, May 16, p. 897 ; May 23, p. 940. *Medical Times and Gazette*, 1885, May 16, p. 658 ; May 23, p. 690 ; May 30, p. 720—Prof. Humphry ; *London Lancet*, Feb. 22, 1879—A Report of the Committee on Government to the Overseers of Harvard University ; E. P. Seaver, chairman ; 1881, '82, '83—Biological Teaching in Colleges ; W. G. Farlow, *Popular Science Monthly*, March, 1886, p. 577.

III.

Nineteenth Century Magazine ; June, 1880, p. 1089, Doctors and Nursing ; Octavius Sturges, Seymour J. Sharkey, Margaret Lonsdale—The same, p. 677, The present Crisis at Guy's Hospital ; Margaret Lonsdale—The

same, p. 884, *The Nursing Crisis at Guy's Hospital*; Sir W. Gull, S. O. Harberson, A. G. Henriques—*The Cornhill Magazine*, Vol. 22, p. 452, *Nursing as a Profession*—*London Lancet*, Aug. 17, 1878, p. 227; Nov. 28, 1885, p. 1016—*New York Medical Record*, Jan. 16, 1886, p. 72.

IV.

The Plymouth Epidemic is described in the *Philadelphia Medical News*, 1885, May 16, p. 541; June 25, p. 681—*The Practitioner*, Vol. 35, No. 3, p. 234—*New York Medical Record*, June 27, 1885, p. 710—*The Scientific American*, June 27, 1885, p. 405.

V.

Fortnightly Review, M. Mackenzie; Vol. 43, June, 1885, p. 772; Vol. 44, Aug. 1885, p. 266—*The same Review*, Vol. 44, July, 1885, p. 67, H. B. Donkin—*Medical Times and Gazette*, 1885, April 25, p. 561; June 6, p. 752; July 4, p. 15—*New York Medical Record*, Sept. 5, 1885, p. 261—*London Lancet*; *Gulstonian Lectures*, C. Allbutt, March, 1884—*British Medical Journal*, Jan. 27, 1883, p. 141—*Medical Times and Gazette*, Oct. 3, 1874, p. 383.

VI.

"Of one hundred possible operations, twenty are imperatively necessary; twenty are absolutely inadmissible; and the remaining sixty may be performed or not, according to circumstances; and surgeons may and do err in each of these classes of cases." Professor Verneuil, quoted in *New York Medical Record*, Jan. 9, 1886, p. 56—"Some Ethical Points in the Practice of Surgery," *London Lancet*, Jan. 9, 1886, p. 72.

VII.

Is Pain a Mystery; I. Burney Yeo, *Contemporary Review*, Vol. 35, p. 646—*The New Cure for Incurables*; Lionel A. Tollemache, *Fortnightly Review*, Vol. 19, p. 218.

The "Birmingham Speculative Club" formulates the relation of the office of the physician to euthanasia, as

follows :—"That in all cases of hopeless and painful illness it should be the recognized duty of the medical attendant, whenever so desired by the patient, to administer chloroform, or other anæsthetic, so as to destroy consciousness at once, and put the sufferer to a quick and easy death ; all needful precautions being adopted to prevent any possible abuse of such duty, and means being taken to establish beyond the possibility of a doubt that the remedy was applied at the express wish of the patient." *New York Medical Record*, Sept 19, 1885, p. 322, Editorial, on a newspaper interviewer's report of the leading physicians of New York City.

VIII.

Female Education from a Medical Point of View, T. S. Clouston ; *Popular Science Monthly*, Vol. 24, p. 214—The little Health of Ladies ; Frances Power Cobbe, *The Contemporary Review*, Jan., 1878, p. 276—Dietetic Treatment of Dyspepsia ; *New York Medical Record*, Nov. 22, 1884, p. 567—Feeding the Sick ; *New York Medical Record*, Aug. 1, 1885, p. 115—Out door Papers ; T. W. Higginson, p. 201—Health and Sex in Higher Education ; John Drury, Ph.D., *Popular Science Monthly*, March, 1886, p. 606.

IX.

Recreation ; Sir James Paget, *Nineteenth Century Magazine*, Vol. 14, p. 977—Rest, by an Optimist ; *Cornhill Magazine*, Vol. 22, p. 223—*Atlantic Monthly*, July, 1885, p. 136—Worry ; Mortimer Granville, *Nineteenth Century Magazine*, Vol. 10, p. 423—Wear and Tear of London Life ; Robson Roose, M.D., *Fortnightly Review*, Feb., 1886, p. 200—Rest and Repair of London Life, Robson Roose, M.D., *Fortnightly Review*, April, 1886, p. 500.

X.

The German government has rebuilt the University at Strasburg, at a cost of £711,000, with a yearly grant of £40,000, the plant being divided as follows :—Chemical Institute, £35,000 ; Physical Institute, £28,000 ; Botanical Institute, £28,000 ; Observatory, £28,000 ; Anatomy,

£42,000 ; Clinical Surgery, £26,000 : Physiological Chemistry, £16,000 ; Physiological Institute, £14,500 (London Lancet, Sept. 19, 1885, p. 535).

A National University was recommended in the annual report (1885) of Mr. Lamar, Secretary of the Interior. The above figures, as a suggestive estimate of cost, would probably startle Congress, unless it were well assured that the privilege of appointing professors, as well as of dictating their resignation, should rest with Senators and Representatives.

